More Powerful Ideas . . .

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. . . that save Army Energy

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POWERFUL IDEAS

This is the second edition of Powerful Ideas that save Army energy from the Army energy programs around the world. They are winning ideas worth sharing that help people conserve with comfort and common sense.

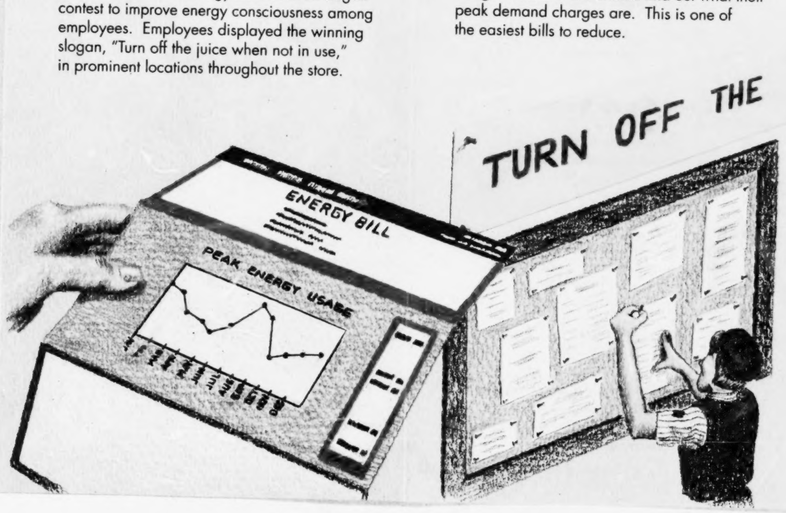
Take a look and see if they will work for you.

AAFES STOPS WASTE

The AAFES store manager at Augsburg Military Community, West Germany, conducted a "delamping" campaign. The store removed from the fixtures all lights that weren't necessary for the display and sale of merchandise. Employees removed more than 700 lamps without hurting customer satisfaction. The manager also conducted an energy conservation slogan contest to improve energy consciousness among employees. Employees displayed the winning slogan, "Turn off the juice when not in use," in prominent locations throughout the store.

WATCH THE PEAK

In most cases an installation's utility bill consists of two bills. The utility company bases one bill on the installation's normal usage, which is similar to what private home owners pay. The utility company bases the other bill on the installation's peak energy demand. Peak demand is based on the highest level of electrical use in a given place over a given period of time. Electricity used during peak demand times is more expensive than electricity used at other times. For example, electrical use at most stateside installations peaks during the summer, because of heavy air conditioning use. Typically, utilities charge on demand because they are running out of their surplus electrical production capacity. This peak demand bill can be a killer in costs. Some utilities charge as high as $18 per kilowatt. This can equate to 40 percent of an installation's total energy budget. Installations should find out what their peak demand charges are. This is one of the easiest bills to reduce.



ALL THE COMFORTS OF HOME

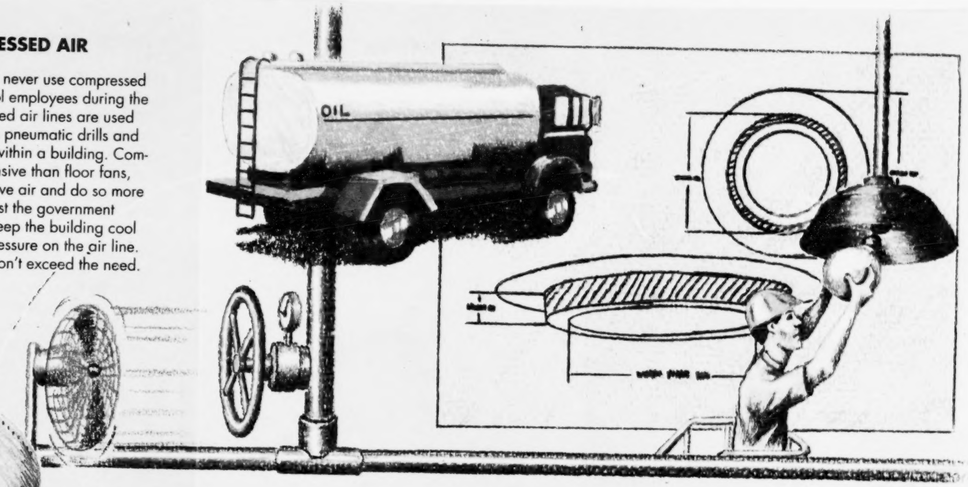
The Augsburg Military Community provides family housing residents with quarterly figures on their electrical consumption costs. The community's Girl Scouts help by posting these results, along with other energy and environmental information, in family housing areas. Stairwell complexes that reduce their energy consumption are presented with community cash awards. Residents can spend the awards on quality of life improvements such as landscaping and barbecues for their areas.

THROTTLE DOWN . . . AUTOMATICALLY

Electrical generators not only provide back-up power, but also kick in during peak demand time, in order to reduce the amount of peak demand use. DEHs could save the government money by installing a device that automatically causes the generator to start up when peak demand time begins, and to shut off when peak demand time ends.

COOL THE COMPRESSED AIR

Ventilation systems should never use compressed air as an air mover to cool employees during the summer. These compressed air lines are used to run machinery, such as pneumatic drills and ratchets, not to move air within a building. Compressed air is more expensive than floor fans, which are designed to move air and do so more effectively. Employees cost the government money when they try to keep the building cool by using the wrong air pressure on the air line. Check the pressure and don't exceed the need.



PLEASE CONTROL THE PCs

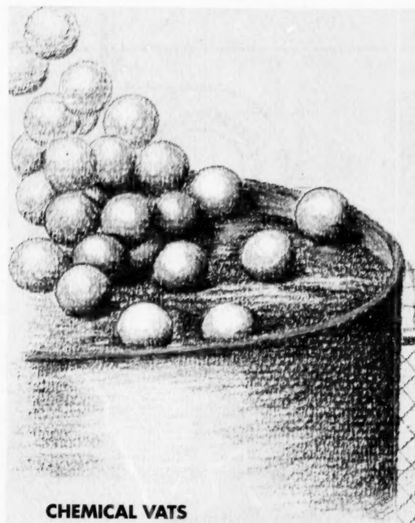
Personal computers don't need to run constantly. Many still believe the myth, "They'll wear out if you turn them on and off." Though alive, the myth is untrue. If employees must leave certain computers on because of required 24-hour access, they should have the special ones tagged and shut off the rest.

STOP THE GAS

DEHs can save money on natural gas by switching to interruptible supplies. Natural gas suppliers are permitted to cut an interruptible natural gas supply for a brief period. For example, during severe cold weather gas supplies may become strained. Those who have back-up systems may be cut off, so that those who have no back-up can get enough gas. Interruptible supplies are also cheaper, and activities that use interruptible gas supplies save the government money. Installations with interruptible natural gas use a back-up system, such as fuel oil. The back-up system provides energy when the supplier has to shut off the gas supply. Often the cost difference between interruptible and non-interruptible supplies can pay for the back-up system in a matter of months.

SWAP-OUT PROBLEMS

At many production and maintenance facilities, DEHs replace incandescent ("bulb") lamps with high-efficiency lighting. This can be effective, but the swap-out typically causes two problems. Workers sometimes install only one set of switches for a whole facility, and one set is inadequate. Lamp placement is another problem. High-efficiency lighting shouldn't follow the same placement pattern as incandescent lamps. Installers can save money by checking out light placement patterns and switching before the swap-out. Whoever installs lamps must come up with a design that is suitable for that building—must use the right design for the right job. DEH people can help provide correct reference materials. For example, sodium or mercury vapor lamps are more energy efficient than incandescent lamps. They also produce more light for the same amount of wattage, so their placement patterns don't need to be as dense.

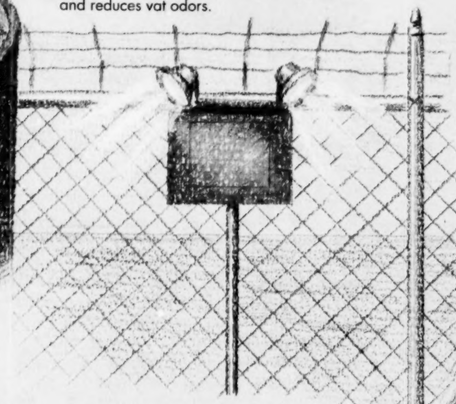


CHEMICAL VATS

Army Materiel Command industrial processing plants use chemical vats to clean and treat metal component parts of tanks, wheeled vehicles, weapons and so forth, when such equipment gets sent off for major repairs. Shops will dip metal components into vats for cleaning or treating — usually heated chemicals that smell. The reaction of the chemicals to the metal causes odors. Ventilation is necessary, because it protects the people who work in the building. Fumes from acid vats, for instance, can kill or seriously injure workers. The ventilation system must replace the exhausted air with equal amounts of fresh outside air. The supply and exhaust fans often operate continuously at full capacity throughout the year. The vat fumes require ventilation, even if the vat contains no metal parts. If employees cover the vats when they aren't using them, the energy requirements for ventilation can drop significantly.

INSULATE CHEMICAL VATS

DEHs can insulate heated chemical vats that have uninsulated sides and fluid surfaces. Employees do this by floating insulation material that is shaped like "ping pong" balls, slabs, or pillows on the liquid chemical surface. These specially designed materials insulate the vat and reduce evaporation. The insulation makes the heating source more energy efficient and reduces vat odors.



SECURITY IN LIGHTS

The 26th Support Group in West Germany identified the security light requirements for a remote site's inner security fence. The DEH used smart engineering and determined that it could connect the security lights to the alarm, since the alarm system was part of the fence. In the event that an intruder triggered the alarm, the lights would go on. This idea provided a uniform annual cost savings of $2,609 through reduced maintenance costs and energy consumption. First year savings paid 69 percent of the systems investment cost.

TIMERS FOR WATER PUMPS

Installing timers will help make sure water pumps don't kick in during peak energy consumption hours. During hot summer months, for instance, heavy water usage often coincides with peak electrical usage. When heavy usage causes water levels to go down in storage tanks, water-level sensors normally cause the pumps to kick in. Pumps cost the government more money when they start up during peak electrical use times. Water conservation practices, such as even-odd lawn watering days, should keep storage tanks from running too low during the hottest part of the day. Timers that make sure water pumps only start up in the cool of the evening will prevent unnecessary use of peak-hour electricity.

WHICH SWITCH

Mark light and electrical switch panels, so that people can tell at a glance exactly what they are turning on and off.

ARMY ENERGY AWARDS

Active Army:

Fort Carson and 4th Infantry Division (Mechanized), Fort Carson, Colorado

US Army Signal Center and Fort Gordon Fort Gordon, Georgia

Dugway Proving Ground, Utah

Army National Guard:

Virginia Army National Guard

South Dakota Army National Guard

Army Reserve:

Second United States Army, Fort Gillem, Georgia

FEDERAL ENERGY AWARDS

Individual Awards:

Lawrence Chenkin
Chief, Energy Management Branch
Fort Eustis, Virginia

William J. DeJournett
Chief, Energy Branch
Directorate of Engineering and Housing
Fort Rucker, Alabama

Peter C. Flodovich
Energy Management Officer
New Cumberland Army Depot
New Cumberland, Pennsylvania

Organizational Awards:

Headquarters, Fort Carson, and
Headquarters, 4th Infantry Division (Mechanized),
Fort Carson, Colorado

Milan Army Ammunition Plant
Milan, Tennessee

Small Group Awards:

Francis W. Sands
Directorate of Materiel and Logistics

and

Raymond Leece
Directorate of Engineering and Housing
Headquarters, 47th Area Support Group
US Army, United Kingdom

Special Award:

Robert G. O'Brien
Chief, Utilities Engineering Division
Directorate of Facilities Engineering
US Army Engineering and Housing Support Center
Fort Belvoir, Virginia

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